DRAFT
DECISION NOTICE
and
FINDING OF NO SIGNIFICANT IMPACT

USDA Forest Service R-8
Ozark National Forest
Pleasant Hill Ranger District
Johnson County, Arkansas

Compartments 411, 412, 413, 414, 415, 416, 417, 418, 444, and 445

Brushy Mountain
8-10-2016

DECISION NOTICE (DN)

Based on an Environmental Assessment (EA) prepared by an interdisciplinary team of Forest Service specialists, decisions regarding management actions for forest health, watershed improvement, ecosystem restoration, wildlife habitat, and recreation over the next several years have been made for the Brushy Mountain project. Decisions have been made for vegetation management including pine seedtree pine thinning, hardwood shelterwood with reserves, hardwood thinning, NNIS treatments, hazardous fuels reduction, and associated roadwork to access and decommission the forest management areas. Wildlife habitat improvement will include the construction and enlargement of new and existing wildlife openings, wildlife stand improvement (WSI), glade restoration, herbicide application for herbaceous vegetation improvement, gate installation, prescribed fire, and the placement of large woody debris (LWD) in stream channels.

These actions are planned to implement the Ozark-St. Francis National Forests (OSFNFs) 2005 Revised Land and Resource Management Plan (RLRMP) goals, objectives, and desired future condition for the timber, widlife, and recreation resources within the project area. In general, the objectives for management in the project area are to regenerate pine stands on appropriate sites, restore ecosystem health and sustainable conditions, watershed improvement, increase plant and wildlife diversity, reduce forest fuel loading through prescribed burning, reduce conflicts between motorized vehicles and other resource values, and increase Forest visitor safety. The management actions designed to meet these objectives address issues and concerns expressed by the public and interdisciplinary team.

The project area of **Brushy Mountain** comprises a total of approximately 17,108 total acres; 12,707 acres of National Forest land and 4,401 acres of private land. The Brushy Mountain project area includes compartments 411, 412, 413, 414, 415, 416, 417, 418, 444, and 445. The legal description is T12NR27 sections 24, 25, 26, 35, 36; T11NR27 sections 1, 2, 11, 12, 13, 14;

T12NR26 sections 19, 20, 27, 28, 29, 30, 31, 32, 33, 34; and T11NR26 sections 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18 (Figure 1 in EA). The project area is bounded on the north by the Mulberry Wild and Scenic River and Scenic Byway 215. The Low Bridge and Pink Twist roads are the east boundaries, State Highway 23 is located on the west boundary, and on the south is the Ozark National Forest boundary. The Brushy Mountain project area falls within the following management areas (MAs): High Quality Forest Products (3.E), Mixed Forest (3.C), Scenic Byway Corridor (1.H), Designated Wild and Scenic River (1.C), Riparian Corridor (3.I), and Developed Recreation Area (2.C).

Based on the analysis documented in the EA, it is my decision to implement **alternative 2** (see attached maps). These actions will have some impact on National Forest lands from vegetation management, watershed improvement, and wildlife habitat improvement work.

Private lands may be involved in the completion of prescribed burning to restore ecosystem health and reduce forest fuel loading, but ***only*** with proper consent of private landowners and completion of applicable agreements.

Specifically, the following actions are planned:

VEGETATION MANAGEMENT:

Pine Seedtree – This will occur on 2 mature stands totaling approximately 45 acres. This type of regeneration harvest will remove 90% of the overstory (10-20ft²/ac.). Site preparation will be done with handtool/herbicide treatments followed by a prescribed burn in order to prepare a proper seed bed. Natural and artificial regeneration will occur to re-stock the stands with an average 300 trees/acre. Following the establishment of the regenerated stand, release treatments with handtools/herbicide may be needed to promote "free-to-grow" conditions. Once the new stand has been formed, the remaining mature overstory trees will be harvested.

Pine Thinning – This will occur on approximately 2,580 acres. Thinning will increase growth of residual trees, reduce susceptibility of the stand to insects and disease, and improve wildlife habitat. The stands will be thinned to an average basal area of 60-80 ft²/acre. Trees that are suppressed or display poor form will be removed. Large trees of good form and/or close to the correct spacing will be favored as leave trees. The target spacing of trees will depend on average tree diameter of the stand. Prescribed burning followed by thinning will provide beneficial effects for wildlife. Timber stand improvement (TSI) treatments of the midstory using herbicide and/or handtools may be utilized to further reduce competition and increase sunlight to developing regeneration.

Hardwood Shelterwood with Reserves – This will occur on approximately 52 acres (two mature forest stands). This treatment will encourage long-term forest health, provide for the succession of early-seral habitat, and contribute to providing a sustainable forest. The objective of a shelterwood is to open up the stand allowing sunlight to reach the forest floor while leaving an adequate amount of trees to provide seed. As the name implies, several trees will be left in the overstory to give shelter to the developing seedlings on the ground. An average basal area of 20-40 ft² will be retained. With Reserves means the mature hardwood left over from the harvests

will remain until the new stands receive their first thinning. The combination of stump/root sprouts from oak species and the other existing desirable seedlings will establish the new stands; hand-planting of oak seedlings may also occur.

Following harvest, these stands will have handtools/herbicide applied to undesirable stems, then burned to prepare the site for natural/artificial regeneration. Needed release treatments by either handtools and/or herbicide 1-5 years after seedling establishment will also take place

Hardwood Thinning – This thinning will occur in 8 stands, totaling approximately 282 acres. This treatment will increase growth of residual trees, reduce susceptibility of the stand to insects and disease, and improve wildlife habitat. The stands will be thinned to a target basal area of 55-70 ft^2/acre. Trees that are suppressed or possess poor form will be removed. Trees of good form and/or close to the correct spacing will be favored. The target spacing of trees will depend on average tree diameter of the stand. Prescribed burning followed by thinning will provide benefits for wildlife. TSI treatments of the midstory using herbicide and/or handtools may be utilized to further reduce competition.

Salvage of Dead, Down, and /or Damaged Timber: The Pleasant Hill Ranger District is susceptible to natural occurrences such as severe drought, wildfire, tornadoes, windstorms, lightning strikes, insect and disease outbreaks, catastrophic ice storms, natural mortality, and human-caused events such as arson and residual material from implemented management activities (i.e. ponds, midstory reduction, thinning, and prescribed burning). These occurrences create hazards for the public and have negative effects on the overall health of the forest. This action will allow the District Ranger to respond to situations within the Brushy Mountain project boundaries where dead, down or damaged trees pose a threat to the public or the health and well-being of the forest in a consistent and timely manner. If the District waits until an incident occurs before making the decision to remove the dead, down, or damaged trees through a salvage or firewood sale, a time lag of several months or more could pass before the decision will be implemented. In many cases this time delay is unacceptable because of hazards to the public and/or it could cause the value of the timber product to degrade significantly due to insect and fungal infestations of damaged trees.

Prior to conducting salvage and/or regeneration operations within the Brushy Mountain project area boundaries, site-specific documentation for each salvage and regeneration action will be prepared and retained by the District. As a minimum, that documentation will have a statement of heritage resource survey requirements and clearance type (categorical exclusion or project notification, or other written agreement between the Arkansas State Historic Preservation Office, affected Native American Tribes, and the OSFNFs), stand prescription cards with details of the current stand and a regeneration plan to return the affected area back to its desired future condition as well as a statement of effects on proposed, endangered, threatened, or sensitive species (TES). Documentation will include the location (compartment and stand), estimated area affected (acreage), a map of the impacted area(s), an estimated volume of timber to be removed, identification of the watershed containing the affected area, and identification of the management area within which the affected area lies and actions to be conducted. Each salvage site will be reviewed by the timber assistant and the timber sale administrator or other qualified staff prior to commencement of salvage operations. The number of acres in which salvage operation activities

may take place will not exceed 3,000 acres per event. Salvage and/or regeneration operations will be conducted within the project area boundaries following the guidelines listed in the 2005 RLRMP.

WILDLIFE HABITAT IMPROVEMENT

Wildlife Opening Construction (New) – Ten new wildlife openings will be constructed. Some of these are linear openings which are utility corridors. Other openings will be constructed in areas where timber harvest occurs. Two existing openings will be increased in size. The total acreage for all wildlife openings will be approximately 19 acres. Stumps, remnant trees and logging debris will be cleared from opening locations with heavy equipment. Openings will then be disked and seeded with cool season or warm season herbaceous species to provide early seral forage for wildlife. Openings will be fertilized and limed and maintained periodically by the use of herbicide application, mowing, disking, seeding, fertilizing, and liming.

Existing Wildlife Openings (Reconstruction) – Twenty-two existing wildlife openings comprising approximately 41 acres will have various levels of reconstruction completed on them. Encroaching hardwood, cedar, and pine trees will be removed from inside and around the perimeters of the openings with heavy equipment. Disking, seeding, fertilization, liming, and herbicide application will be utilized to improve these openings and provide early seral cool season habitat for wildlife.

Wildlife Stand Improvement (WSI) – Approximately 318 acres of WSI will occur. This treatment will be utilized to restore open woodland conditions to low quality timber areas. Selective herbicide application, chainsaw felling and or mechanical means will be used to reduce basal area to approximately 50 ft^2/acre. This will allow for greater light penetration to the forest floor and provide increases in herbaceous species diversity and abundance. Game species such as white-tailed deer and turkey will benefit. Disturbance dependent neo-tropical migratory birds will benefit. TES bat species will benefit from habitat improvement. Rare plants such as small-headed pipewort will benefit.

Glade Restoration – Approximately 4 acres of glade restoration will occur. This treatment will remove encroaching hardwood, cedar and pine trees from a glade which contains small-headed pipewort which is a Forest Service Region 8 sensitive plant species (rare plant). This work will be accomplished by selective herbicide application, chainsaw felling and or mechanical means.

Large Woody Debris (LWD) in Stream Channels – Large woody debris will be placed within approximately 9.4 miles of stream channels within the project area. Larger diameter trees will be felled with chainsaws into stream channels to improve fish habitat, increase pool formation in stream channels and assist with bank stability.

Non-Native Invasive Species (NNIS) – The occurrences of Tree of Heaven, and invasive tree species, will be treated with herbicide under an existing National Environmental Policy Act (NEPA) EA and decision record (DN). This decision was signed by the District Ranger in 2009, and allows the use of approved herbicides district-wide to control infestations of NNIS.

Gates – Twelve gates and/or gates in combination with fences will be constructed at the locations of new wildlife openings constructed under the selected action. All of the gates will be placed on access driveways to wildlife openings. Gates will provide seclusion to wildlife openings, prevent damage to openings from vehicles and provide for increased hunter experience and success. Forest Service (FS) road 94418D will be decommissioned and will be the only system road in this project area in which a gate will be installed.

An existing gate is located in Compartment 417 at the intersection of 94417B and 94417F used to protect a wildlife opening from resource damage. This gate will remain closed during most of the year, however, during the modern gun deer season the gate could be opened to allow hunters better access to the area.

Additionally there is an existing gate located on the Devils Ridge Road that protects 7 wildlife openings from resource damage. The gate is not functional as it is in bad shape and being driven around. This gate will be replaced to ensure it functions properly.

PRESCRIBED BURNING

All Forest Service land within the Brushy Mountain project area (12,707 acres) will potentially receive low to moderate intensity prescribed burns to reduce hazardous fuels and wildfire risk, improve wildlife habitat, and for silviculture purposes. Knutson-Vandenberg (KV) retained receipt funded prescribed fire will be implemented on all acres possible within KV sale area boundaries surrounding pine thinning units.

Prescribed fire treatments may occur on private lands (approximately 4,401 acres) located within the Brushy Mountain project area, but ***only*** after consultation with landowners and a prescribed fire agreement under the Wyden Amendment (Section 334(a) of Public Law 105-83) and/or Stevens agreements in cooperation with the Arkansas State Forestry Commission is signed by both parties. Should agreements with private landowners be signed, private lands will be burned by the Arkansas Forestry Commission under prescription in conjunction with prescribed burns on public lands. Prescribed fire will be utilized for several purposes in the project areas.

Prescribed fire will serve to re-introduce fire into a fire-adapted ecosystem, promote oak regeneration in canopy openings created by red oak borer damage/oak decline, regeneration in shelterwood and seedtree harvest areas, maintain pine/hardwood stands in open conditions, increase herbaceous understory species density and diversity, improve habitat conditions for fire-dependent special-status plants, increase soft-mast production and reduce potentially hazardous accumulations of fuels on the forest floor, and improve wildlife habitat conditions. Portions of the project area will be burned on an approximate 3-10 year fire return interval, based on best available science regarding beneficial fire-return intervals for the project area. Mechanical fuels reduction may be utilized in areas where use of fire is not possible, or to better facilitate fuels reduction adjacent to private lands or developments.

ROADWORK

Reconstruction: Approximately 8.8 miles of old, existing roads will be reconstructed. These roads are situated on somewhat stable templates that display signs of age where spots of erosion are occurring and drainage crossings are crumbling. Reconstruction will help stabilize, thereby reducing erosion and sediment from reaching streams

Maintenance: Approximately 33.6 miles of open and closed roads will receive maintenance within the project area in order to obtain suitable road conditions for hauling timber. County roads anticipated to be used are regularly maintained by their respective counties, along with Forest Service assistance. Closed roads will temporarily be opened during timber/silvicultural activities and immediately closed again with gates or mounds after all activities have been completed to reduce erosion caused from vehicle traffic and protect wildlife habitat.

Decommissioning: Approximately 18.6 miles of existing roads no longer needed for management or access will be decommissioned within the project area. This entails restoring roads to a more natural state. Activities used to decommission a road will include, but are not limited to the following: re-establishing former drainage patterns, stabilizing slopes, restoring vegetation, blocking the entrance to the road, installing water bars (earthen mounds), and removing culverts. Unnamed and illegally accessed off-highway vehicles (OHV) trails present in the project area may be closed using debris, rocks, earthen mounds, or gates.

Temporary Roads: Approximately 4.4 miles of temporary roads will be needed to access timber stands. These roads will be blocked, and then rehabilitated with seeding and/or natural re-vegetation. Temporary roads will not be intended to be included as part of the forest transportation system as they are managed for short-term projects or activities, followed by decommissioning after use.

Access: Adjacent landowners whose property blocks access to Federal land will be contacted by the Forest Service. Neighbors of the forest will be asked to consider allowing entrance to these otherwise inaccessible areas for forest management and fire protection.

HERITAGE RESOURCES

The project has been designed so that all sites that may be eligible for the National Register of Historic Places, or that are of undetermined eligibility, lie outside any of the project's areas of planned ground-disturbing activity. Historic site areas which contain no organic cultural material will undergo prescribed burning. Past research has shown that sites such as these will not be affected by prescribed fire.

Should any additional sites be found during project implementation, they will be examined by a professional archeologist, who will prescribe appropriate mitigation measures.

Based on these findings, all sites will be preserved intact and no significant effects will occur to historical or prehistoric sites that may be eligible for nomination to the National Register of Historic Places.

ENVIRONMENTAL EFFECTS:

Implementation of alternative 2 using the mitigation measures as shown on pages 28-37 of the EA will have some effects on the environment. These effects are stated on pages 37-116 of the EA and are summarized in Table 15 on page 37 and 38 of the EA. Environmental effects by various resource categories are briefly described as follows:

Water – The project area and the sub-watershed analysis area support streams and rivers that have a dendritic drainage pattern. Dendritic drainage patterns typically have branching tributaries, which can concentrate precipitation across a wide area into one main stream channel. The primary streams that are found in the project area are: Rock Creek, East and West Prongs of Barron Creek, Oak Creek, John Turner Creek, and the Mulberry River, along with several unnamed tributaries. The creeks and tributaries generally flow north or west and join the Mulberry River which is a designated Wild and Scenic River. The Mulberry River then flows southwest until it joins the Arkansas River.

The cumulative effects analysis indicates minimal risks to the water resource's current condition. The activities proposed by the Forest Service for the proposed action would result in an overall decrease in sediment production from the landscape. Additionally, it should be possible to schedule these activities over time instead of instantaneously as predicted by the analysis, thus further reducing the possibility of acute effects. Through the use of Forest Plan Standards and the use of Arkansas Silviculture BMPs, the activities scheduled for implementation should not pose additional risks to water quality or designated uses. Monitoring in the form of subsequent fisheries evaluation and BMP compliance checks should be adequate to discern any adverse effects which may result from the implementation of the proposed action.

Soils - Most of the soils have 100% cover consisting of leaf litter twigs, limbs, logs, gravel, stones, and have an intact root mat. Soils in the road beds of closed roads have some ground cover protecting them, but are mostly bare and eroding in some sections.

Approximately 23% (2,966 acres) of the project area would sustain a temporary reduction in soil productivity due to harvesting operations. The temporary reduction would last 25 years or less. An additional 8.9 acres (<1% of the harvest area) would sustain a temporary reduction in soil productivity due to temporary road construction. Soil productivity would be lost on approximately 5.4 acres due to road reconstruction. Approximately 8 acres of the harvested area would sustain a temporary reduction in soil productivity due to fireline construction. Approximately 19 miles of road are proposed for decommissioning which would greatly improve soil productivity.

The areas that are proposed for timber harvest have not been harvested for 10 years or more and show little to no evidence of detrimental soil disturbance consisting of rutting, displacement of the top soil, compaction, or erosion. There are no known future activities in addition to the proposed action that would impact soils. Skid trails, log landings, and temporary roads would be smoothed, disked, and seeded to prevent erosion and to speed soil recovery. Soil disturbance that would potentially result from the proposed action are expected to be within the RLRMP standard that requires that on soils dedicated to growing vegetation, the organic layers, topsoil, and root mat would be left intact over 85% of activity areas.

Herbicides – The herbicides glyphosate, triclopyr, imazapic, imazapyr, and hexazinone have the potential to be applied for site preparation. Non-ionic surfactants may be mixed with herbicides in order to improve application success. With the use of listed mitigation measures, no significant long-term degradation or cumulative effects, including state standards, on soils and water quality are anticipated from implementation of alternative 2.

Direct effects, occurring at time of application, to birds or large mammals are unlikely, since these species are likely to move from the area when project activities are implemented. Although direct effects to amphibians are more likely since contact with herbicide could be absorbed through the skin, amphibians are likely to be under logs, rocks or leaves, making direct contact (from spray) with chemicals less likely. Direct effects to other non-target plants occurring in these habitats could occur. Application methods, including directed application to target foliage or freshly cut stumps/surfaces, will minimize the possibility of direct contamination to non-target species. The most plausible possible direct effects to humans will be to workers from continuing work in contaminated clothing. Proper handling and cleanliness of personal protective gear will mitigate this possibility. More implausible direct effects to the general public may occur via walking through recently treated (wet) vegetation in shorts and consuming contaminated fruit.

Direct and indirect effects from chemical spills of all herbicides analyzed - to humans, wildlife and plants are minimized by following proper mixing and handling procedures, Forest-Wide Standards and BMPs.

Adverse, indirect effects to management indicator species (MIS) and habitats treated with all chemicals are reduced given that applicators treat target plants only and field formulations contain diluted concentrations of chemical. Additionally, mitigation measures, BMPs and Forest-Wide Standards will be used.

There are likely to be few negative cumulative effects to humans, wildlife or plants over time as a result of implementing alternative 2. None of the herbicides proposed for use will bio-accumulate or have lengthy half lives in the environment. Implementation of Alternative 1 would not authorized use of herbicide other than that which has already been analyzed under a previous NEPA decision for maintenance of wildlife openings and abatement of NNIS.

Air - Alternative 2 has total emissions/day of 20,261 tons (based on approx. 3,800 acres/day) but will last for only 4 days, which may not necessarily be consecutive. This calculation does not take into account the private land acreage that is within the project boundary. Some or a large majority of these lands may be burned, depending on private landowner cooperation within the National Forest via prescribed burning agreements. So, burning days may be extended to accommodate private land acreage; but rarely is the daily acreage rate increased.

For air quality, cumulative effects include all reasonable and foreseeable activities that produce pollutants. Emissions from prescribed burning and from vehicles and machinery during management activities will contribute greenhouse gases and pollutants to the atmosphere, but the volume of these emissions will be inconsequential and are not expected to have a cumulative impact on current air quality.

Burns will follow approved burning plans to manage the smoke and burning intensities. Mitigation measures will ensure compliance with federal, state and local clean air requirements, and no long-term cumulative effects are anticipated from implementation of the proposed action. Arkansas voluntary smoke management guidelines will be followed to assure adherence to air quality regulations and prevent negative impacts to smoke sensitive areas.

Climate Change - Some of the carbon currently sequestered in vegetation and soils will be released back to the atmosphere. In the short-term, greenhouse gas emissions and alteration to the carbon cycle will be caused by hazardous fuel reduction activities, harvests, and thinning of overstocked stands. In the long-term, however, these actions will also increase the forest's ability to sequester additional carbon, improve the forest's resilience to the potential impacts of climate change and decrease the potential for uncharacteristically severe wildfires. Timber harvest will remove some of the mature stems with diminished ability to sequester additional carbon; some of the carbon sequestered in harvested stems will continue to be stored in manufactured wood products. Residual stems and regeneration in the proposed project area will continue to sequester and store carbon.

Road Work – Maintenance on approximately 33.6 miles of open and closed roads will be performed in this project to get the roads in a suitable condition for hauling timber across them. Maintenance consists of spot blading and graveling. County roads that would be used are regularly maintained by their respective counties. Special cooperative agreements are in place to assist in any required maintenance resulting from logging operations. Several Maintenance Level 1 and 2 roads that were previously closed will be re-closed with gates/berms to reduce erosion and protect resources. The Forest Service Manual states that Maintenance Level 1 roads are to be closed to motorized traffic when management activities are complete.

Reconstruction on approximately 8.8 miles of roads is proposed for: (1500, 1500A, 94411A, 94411H, 94412A, 94413A, 94413B, 94414H, 94415E, 94416H, 94417B, 94417C, 94418A, 94418B, 94417C, 94418A, 94418B, 94418F, and 94418N) These roads are not maintained on a regular basis thus requiring more work than the roads that require maintenance. Up-grading these roads by installing new culverts, wing-ditches, gravel, and rolling dips will stabilize them, thus minimizing sediment delivery to streams and drainages.

Approximately 18.6 miles of existing roads no longer needed for management or access are proposed for decommissioning. Decommissioning involves restoring these roads by allowing them to blend back in to the general forest area. Activities used to decommission a road include, but are not limited to the following: re-establishing former drainage patterns, stablizing slopes, restoring vegetation, blocking the entrance to the road, installing water bars (earthen mounds), and removing culverts. These activities are designed to completely eliminate the roadbed by restoring natural conditions. Unnamed and illegally accessed OHV trails that are present in the project area may be closed using debris, roccks, earthen mounds, or gates.

Approximately 4.4 miles of temporary roads would be needed to access timber stands. These roads would be blocked and rehabilitated with seeding and/or natural re-vegetation. Temporary roads are not intended to be included as part of the forest transportation system but rather

managed for short-term projects or activities and will be decomminssioned after use.

The density of open roads would decrease under Alternative 2 as all presently-closed Forest Service roads would not be re-closed upon completion of the project. Currently, total road density of Forest Service roads per square mile is about 4.8 miles length/mile^2. Under Alternative 2, the road density decreases to 3.2.

The auditory and visibility impacts of road-using equipment should be relatively short-lived with very little effect on the environment. Re-closure and decommissioning of roads will reduce erosion and improve water quality in the project area.

Based on the watershed analysis that evaluates roads' contribution of erosion and sediment in alternative 2, rates of delivery are considered low risk.

Heritage Resources – The greatest risks for archeological sites on the Forest come from unmanaged and unmonitored resources. Planned management and restoration activities benefit the cultural landscape by controlling intrusive vegetation, excessive accumulation of fuel load and risk of wildfire, and managing recreational use (i.e. dispersed campsites, OHV usage of roads and trails). The federal presence that results from the implementation of project activities will be expected to benefit cultural resources over time by increasing opportunities for the monitoring of sites for looting and vandalism, thus assisting with enforcement of federal protection laws.

Vegetation and Vegetation Diversity – The Brushy Mountain project area has approximately 1,745 acres (<14%) that are currently classified as unsuitable for timber production. Of these, approximately 1,618 acres (13%) can be considered as old-growth forest management status.

Implementation of this alternative is not expected to have a negative cumulative impact on vegetation. The forest condition would be improved and left in a more sustainable condition. Risk of insect/disease outbreaks would decrease and the vigor of residual trees would increase. Also, potential old-growth would not decrease in the project area.

Wildlife – With implementation of alternative 2 approximately 60 acres of public land would be converted to or maintained as grass/forb habitat through existing wildlife opening maintenance, existing wildlife opening enlargement and new wildlife opening construction.

Implementation of conversion to grass/forb habitat would result in 0.5% of the public land-base within the project area compartments in this habitat type, as opposed to 0.3% under current conditions. Through construction/enlargement of wildlife openings approximately 19 acres would be changed from the current 41-60 year age class – to grass/forb habitat.

Approximately 318 acres of wildlife stand improvement thinning and 4 acres of glade restoration would be completed with implementation of the proposed action. Thinning would reduce canopy density and tree basal area, thereby providing better habitat conditions for native herbaceous species.

Approximately 2,869 acres would be restored to woodland condition through thinning in the 41-80 year age classes and maintenance prescribed burning. Browse and early-successional habitat would be provided in these thinned areas for a variety of wildlife species, especially when combined with prescribed fire. Viability of disturbance-dependent avian species would be enhanced. Avian species requiring both large and small areas of early successional vegetation and forest edge would benefit.

Implementation of alternative 2 would result in less than a 2% reduction of forest habitat that is greater than 81 years old (federal lands). Following implementation of this alternative, approximately 63% of the forested (both pine and hardwood) public land base within the project area compartments would remain in the 81-101+ year age classes. With implementation of alternative 2, and taking into consideration recruitment of stands from the 61-80 year age class over the next 1-10 years (approximately 986 acres or 9% of project area land base), as well as examination of distribution of stand age classes, fragmentation of interior forest habitat is not anticipated.

Fisheries – Activities planned will have minimal effect on water quality and fish habitat using the planned mitigation measures. Existing quality of fisheries should be maintained with a low risk of acute or chronic adverse effects to aquatic species from the planned actions.

TES (Threatened, Endangered and Sensitive Wildlife Species) – From past field surveys and knowledge of the area, and given the proposed action, those species which are analyzed and discussed further in this document are those that:

- Are found to be located in the activity area (OAR code "5"),
- Were not seen during the survey(s), but possibly occur in the activity area based on habitat observed during the survey(s) or field survey was not conducted when species is recognizable (OAR code "6"), and
- Aquatic species or habitat known or suspected downstream of the project/activity area, but inside identified geographic bounds of water resource effects analysis area (OAR code "8").

Based upon the site-specific water quality analysis for the Brushy Mountain project - the minor sediment increase from the alternative 2 is expected to be insignificant in comparison to the existing sediment load of the Mulberry River and its tributaries, and would not have significant effect on habitat for fish or other aquatic life. There would be no negative direct, indirect or cumulative effects to aquatic species from implementation of management activities associated with this project proposal. No significant impacts (from loss of water quality) would result from implementation of this project that would push aquatic species closer toward federal listing under the ESA, or cause loss of viability for these species. There are no foreseeable activities in the area that would directly or indirectly affect water quality needs for longnose darter, spectaclecase mussel, *Lirceus biscuspicatus,* William's crayfish and Neartic paduniellan caddisfly or cause additive or synergistic adverse cumulative impacts in conjunction with the proposed action – due to sedimentation. Therefore, there would be no negative direct, indirect, or cumulative effects to

these species as a whole from management activities associated with this project due to sedimentation.

Twelve species were not seen during field surveys, but possibly occur in the analysis area based on habitat observed or the field surveys were conducted when the species is not recognizable (OAR "6"); 3 mammal species (gray bat Eastern small-footed bat and Indiana bat), 1 isopod species (*Lirceus isopod)* and 8 plant species (Ouachita leadplant, Bush's poppymallow, Moore's larkspur, French's shooting star, Ovate-leaf catchfly, Ozark spiderwort, Nuttall's cornsalad, and Ozark cornsalad).

The occurrence analysis results table shows 1 bird species (bald eagle), 2 mammal species (Ozark big-eared bat and Northern long-eared bat), and 3 plant species (Ozark chinquapin, Southern lady's slipper and small-headed pipewort) were identified within the analysis area (OAR "5").

The occurrence analysis results table shows 1 fish species (longnose darter), 1 mollusk species (spectaclecase mussel), 1 crustacean species (William's crayfish) and 1 insect species (Nearctic paduniellan caddisfly) are known or suspected to occur downstream of the project area (OAR "8").

Alternative 2 was designed to totally incorporate all Forest-wide standards, and direction provided by the USFWS related to the conservation of all listed bat species.

There are no foreseeable, additional management activities in the area (not associated with this project) that would directly or indirectly affect the Ozark big-eared bat, Gray bat, and Indiana bat or cause additive or synergistic adverse cumulative

Human Health – There is a risk of worker injury during the completion of manual/mechanical vegetation treatments, and prescribed fire. Proper use of PPE, adherence to job hazard analyses and safety practices mitigate this risk. Risk to the public from these types of work is minimal. However, with proper handling/transport methods, use of signing in application areas (where required), use of proper application methods and equipment, and use of required PPE, risk of herbicide exposure to workers and the public is mitigated with implementation of alternative 2.

Removal of dead and/or aging trees through thinning operations and fireline preparation will make the forest safer for visitors, through reducing the incidence of falling snags and limbs.

Use of prescribed burning will lessen potential wildland fire occurrence, wildland fire severity and unplanned smoke emissions. Strict adherence to the Final Environmental Impact Statement (FEIS) and 2005 RLMRP guidelines, a site-specific burning plan and Arkansas Voluntary Smoke Management Guidelines will limit the area where specific burn plans, and Arkansas Voluntary Smoke Management Guidelines ensure that smoke or other combustion products do not reach, or significantly affect, smoke sensitive areas. Smoke monitoring during and after prescribed burns will be conducted to determine compliance with smoke management guidelines, and for potential future mitigation required for downwind smoke sensitive areas. These actions will ensure that the requirements of the Clean Air Act, EPA air standards, and state requirements

will be met and there should be no smoke related long-term or cumulative effects from implementation of prescribed fire.

Economic/Social – Local communities benefit from the taxes generated by timber activities. These benefits include social services such as law enforcement activities, safe drinking water, road maintenance/construction/reconstruction, and public school systems. These services contribute to an enhanced standard of living to the public within the area.

Activities proposed would affect the local economy by supplying timber for local mills, employing loggers to harvest timber, hiring truck drivers, employing people to do site preparation, TSI/PCT, and wildlife habitat improvement work.

The revenues derived from the selling price of timber would contribute to school and road funds in Franklin County. At the time of the Brushy Mountain project economic analysis, hardwood sawtimber sold for $71.18/ccf, hardwood pulpwood sold for $8.12/ccf, pine sawtimber sold for $51.01/ccf, and pine pulpwood sold for $19.59/ccf. These figures reflect an average from several timber sales recently sold on the Ozark National Forest. Table 28 lists the Present Net Value of implementing alternative 2.

Management Areas, Aesthetics, and Recreation –Vegetation management and prescribed burning will allow views which penetrate into the stands, allowing views further than the existing near foreground, and in the long-term provide the stands with greater aesthetic value and greater diversity of understory species. Area visitors will see and smell smoke during burning, see blackened trees and ground for the first season until the next spring green-up, see some browning of vegetation from harvest activities during the initial work in stands along county and forest roads.

Planned activities will have some short-term effects on aesthetics and recreational users may suffer temporary inconveniences from the implementation of planned work. No significant long-term or cumulative effects on these aesthetic and recreation resources are anticipated. Implementation of the selected alternative will have no long-term negative effects or cumulative negative effects.

Other alternatives considered in detail were:

Alternative 1. **No Action**: Analysis of this alternative measured the effects of not implementing the proposed ecosystem restoration, wildlife and associated vegetation management actions on the physical, biological, human health, and economic and social components of the environment. Only custodial management such as road maintenance, fire control and law enforcement will occur. Implementation of this alternative will not allow for the restoration of ecosystem health or create sustainable forest ecosystem conditions through thinning and regeneration treatments and restoration of the fire regime mimicking historic/natural fire-return intervals. Implementation of this alternative will not increase plant and wildlife diversity. Habitat for early successional/disturbance-dependent species will not be improved. Historic ecosystems of oak forest will not be maintained for vegetation and wildlife. Implementation of this alternative will not reduce forest fuels or reduce risk to forest ecosystems and private property. Implementation

of this alternative will not reduce conflicts between motorized vehicle use and other resource values. Implementation of this alternative will not increase or improve recreational uses on the Forest or improve Forest visitor safety. No direct revenues to the federal or county treasuries will occur from the sale of commodities and no employment opportunities will be generated. The objectives of the 2005 RLRMP for wildlife and timber will not be met.

My reasons for choosing **Alternative 2** were:

Overall, I viewed this proposal as the one best meeting the goals and objectives of the 2005 RLRMP while still addressing the issues and concerns raised by the public, other agencies, and by the interdisciplinary team. Specifically, the reasons are:

- The selected alternative, as mitigated, addressed the issue of immediate and cumulative effects from past, current, and proposed actions on soil erosion, soil nutrient/productivity loss, and sediment/storm runoff, and wildlife habitat in the project area. The analysis shows that at the harvest level of alternative 2, some soil compaction, soil disturbance, slight increases in nutrient and erosion loss, some increased sedimentation and stormflow, and a possible change in water chemistry will occur. However, these changes are still below the threshold level of environmental concern. After a short degradation of wildlife habitat from vegetation manipulation, the early seral habitat produced from the activities will provide for increased biological diversity and long-term wildlife benefits. There should be no long-term or cumulative effects on the environment from the planned actions.

- The issue of effects of past, present, and proposed activities on vegetation is analyzed in the EA pp. 37-116. Effects for this alternative on fragmentation are minimal, since all areas to be worked will retain a forest canopy, except for road corridors.

- With implementation of alternative 2 approximately 60 acres of public land would be converted to or maintained as grass/forb habitat through existing wildlife opening maintenance, existing wildlife opening enlargement and new wildlife opening construction.

- Implementation of conversion to grass/forb habitat would result in 0.5% of the public land-base within the project area compartments in this habitat type, as opposed to 0.3% under current conditions. Through construction/enlargement of wildlife openings approximately 19 acres would be changed from the current 41-60 year age class – to grass/forb habitat.

- Approximately 318 acres of wildlife stand improvement thinning and 4 acres of glade restoration would be completed with implementation of the proposed action. Thinning would reduce canopy density and tree basal area, thereby providing better habitat conditions for native herbaceous species.

- Approximately 2,869 acres would be restored to woodland condition through thinning in the 41-80 year age classes and maintenance prescribed burning. Browse and early-

successional habitat would be provided in these thinned areas for a variety of wildlife species, especially when combined with prescribed fire. Viability of disturbance-dependent avian species would be enhanced. Avian species requiring both large and small areas of early successional vegetation and forest edge would benefit.

- Implementation of alternative 2 would result in less than a 2% reduction of forest habitat that is greater than 81 years old (federal lands). Following implementation of this alternative, approximately 63% of the forested (both pine and hardwood) public land base within the project area compartments would remain in the 81-101+ year age classes. With implementation of alternative 2, and taking into consideration recruitment of stands from the 61-80 year age class over the next 1-10 years (approximately 986 acres or 9% of project area land base), as well as examination of distribution of stand age classes, fragmentation of interior forest habitat is not anticipated.

- Prescribed fire will serve to re-introduce fire into a fire-adapted ecosystem, promote oak regeneration in canopy openings created by red oak borer damage/oak decline, promote regeneration in shelterwood and seedtree harvest areas, maintain pine/hardwood stands in open conditions, increase herbaceous understory species density and diversity, improve habitat conditions for fire-dependent special-status plants, increase soft-mast production and reduce potentially hazardous accumulations of fuels on the forest floor, and improve wildlife habitat conditions. If Rx burning is not conducive, then mechanical fuel reduction will be applied if sufficient funding is available.

- Alternative 2 will provide a positive effect on the local economy by providing forest products, government revenues, and job opportunities. This alternative will also improve forest health and the surrounding watershed.

- When implemented, alternative 2 will be monitored through timber sale inspections, regeneration surveys, water quality monitoring, and other actions listed in the mitigation measures on pages 28-37 of the EA.

FINDING OF NO SIGNIFICANT IMPACTS (FONSI):

Based on my review of the above analysis and from past experience, I have determined that the proposed actions are not a major Federal action either individually or cumulatively, and will not significantly affect the quality of the human environment. Therefore, an EIS is not necessary. This determination is based on the following factors (40 CFR 1508.27):

1. Both beneficial and adverse effects have been considered and this action should not have a significant effect on the quality of the human environment (EA, pp. 37-116).

2. The actions should not significantly affect public health or safety (EA, pp. 105-109).

3. The project will not significantly affect any unique characteristics of the geographic area such as proximity to historic or cultural resources, ecologically critical areas, or the Scenic Byway (EA, pp. 81-86, 86-91, 110-116).

4. The effects on the quality of the human environment are not likely to be highly controversial (EA, pp. 37-116).

5. The actions do not involve highly uncertain, unique, or unknown environmental risks to the human environment (EA, pp. 37-116).

6. The actions in this decision will not establish a precedent for future actions with significant effects nor does it represent a decision in principle about a future consideration.

7. There will be no cumulatively significant impacts on the environment. The cumulative effects of the proposed actions have been analyzed with consideration of other similar activities on adjacent lands, in past actions, and in foreseeable future actions (EA, pp. 37-116).

8. The actions will not affect any sites listed, or eligible for listing, in the National Register of Historic Places nor cause loss or destruction of significant scientific, cultural, or historic resources (EA, pp. 81-86).

9. The actions are not likely to adversely affect endangered or threatened plant or animal species, or their critical habitat (EA, pp. 99-105).

10. None of the actions threaten to lead to violation of federal, state, or local laws imposed for the protection of the environment (EA, pp. 37-116).

For water quality management, state-approved Best Management Practices (BMPs), which are incorporated into the mitigation measures, will be used for this project. These BMPs are from the state water quality management plan and have been designed with the goal of producing water that meets state water quality standards. The project will be monitored to ensure BMPs are implemented. If implementing BMPs on a specific site results in effects significantly higher than anticipated because of unforeseen site factors or events, appropriate corrective measures will be considered and implemented.

Actions are also consistent with the Antiquities Act, Endangered Species Act, Clean Air Act, Clean Water Act, and all other applicable state and federal laws and regulations. Additionally, the best available scientific data was used when selecting and analyzing the effects of the proposed action.

OTHER FINDINGS:

1. The actions of the project are consistent with the OSFNFs 2005 RLRMP goals and objectives. All of the actions associated with this project occur within Management

Areas: High Quality Forest Products (3.E), Mixed Forest (3.C), Scenic Byway Corridor (1.H), Designated Wild and Scenic River (1.C), Riparian Corridors (3.I), and Developed Recreation Area (2.C). All of the planned actions associated with these projects are consistent with the management prescriptions and management practices for these Management Areas. The actions are also consistent with the 2005 RLRMP because mitigation measures for impacts shall be fully applied in implementation. The project is feasible and reasonable, restores ecosystem health, protects the environment while producing goods and services.

2. The actions of this project comply with the ecological, social, and economic requirements of 36 CFR 219.19 by following the Forest-wide standards and guides. These actions also meet the General Management requirements and Mitigation Measures in the Record of Decision (ROD) of the FEIS for Vegetation Management in the Ozark/Ouachita Mountains. The requirements met are:

    1. The activities chosen are best suited for the multiple-use goals of the area.

    2. All practices prescribed for vegetation management areas will maintain adequate stocking for the area now and in the future. Areas selected for shelterwood harvest are mature stands of trees, have good seed-producing qualities, and are situated on suitable soils for natural regeneration.

    3. Alternative 2 was not selected based upon the output of timber. This alternative provides a positive effect on the local economy, forest health, recreation and wildlife and has only minimal short-term effects on other resources.

    4. The activities chosen will not adversely affect residual trees in adjacent stands.

    5. The activities chosen, with mitigating measures, avoid permanent impairment of site productivity and ensure conservation of soil and water resources.

    6. The activities provide for meeting 2005 RLRMP objectives for all resources.

    7. The activities are practical in terms of transportation, vegetation management and total cost of site preparation, logging, and administration.

IMPLEMENTATION:

The Final EA and Draft DN/FONSI are available on-line at:
http://www.fs.usda.gov/detail/osfnf/landmanagement/planning/?cid=stelprdb5212216

Once you have reached this site, scroll down the page and the Final EA/Draft DN will be located under the project name "Brushy Mountain."

These documents along with any additional information are also available for review at the Pleasant Hill Ranger District, 2591 Hwy 21 North, Clarksville, AR. 72830.

PAT KOWALEWYCZ Date
District Ranger